



## REPLACEMENT SHEET

4/15

Accepted /OK

5/20/04

JMM

- $t_0$ : WORD LINE CLAMP RELEASED, ACTIVE PULLDOWN TO 0
- $t_1$ : BIT LINE CLAMP RELEASED - SENSE AMP ON
- $t_2$ : BIT LINE DECISION - DATA LATCHED
- $t_3$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_4$ : WRITE DATA LATCHED ON BIT LINES
- $t_5$ : WORD LINE PULLED TO  $V_s$  - SET/RESET CELL
- $t_6$ : WORD LINE RETURNED TO QUIESCENT  $V_s/2$
- $t_7$ : BIT LINES ACTIVELY RETURNED TO  $V_s$  CLAMP
- $t_8$ : READ/WRITE CYCLE COMPLETE

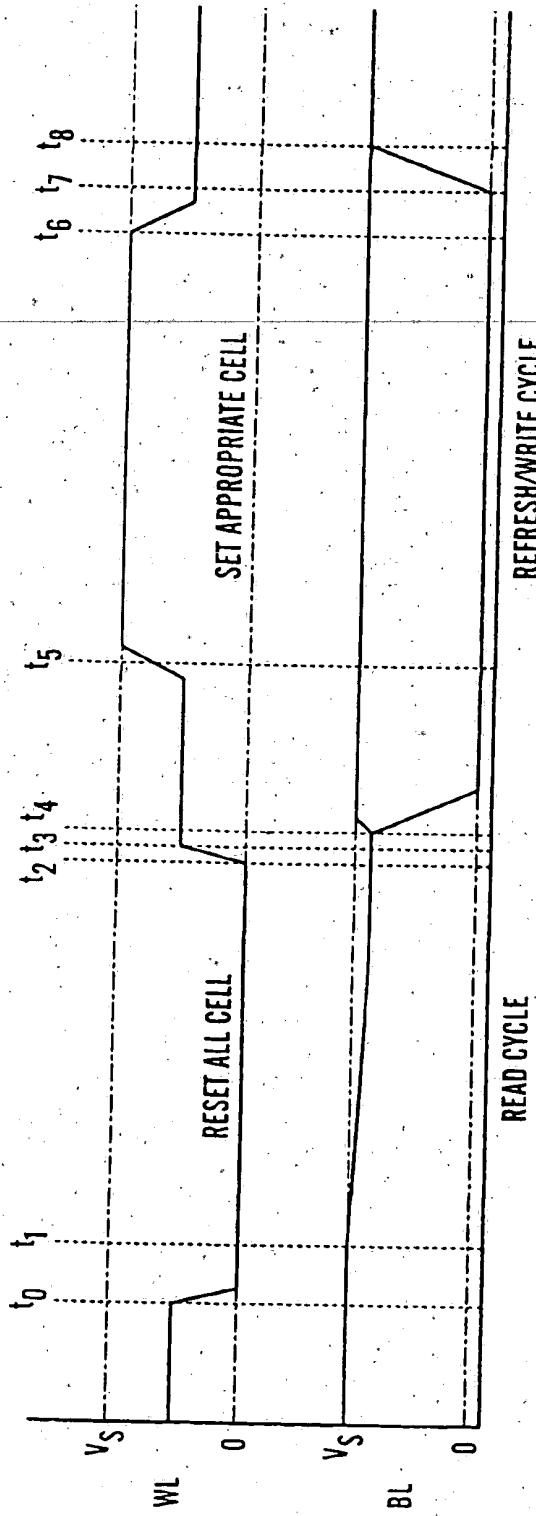
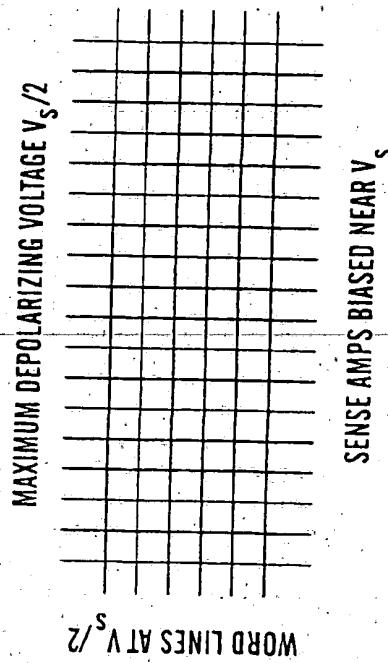


Fig.4



# REPLACEMENT SHEET

**5/15**

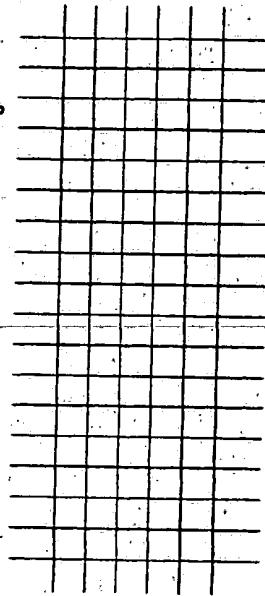
*Accepted*

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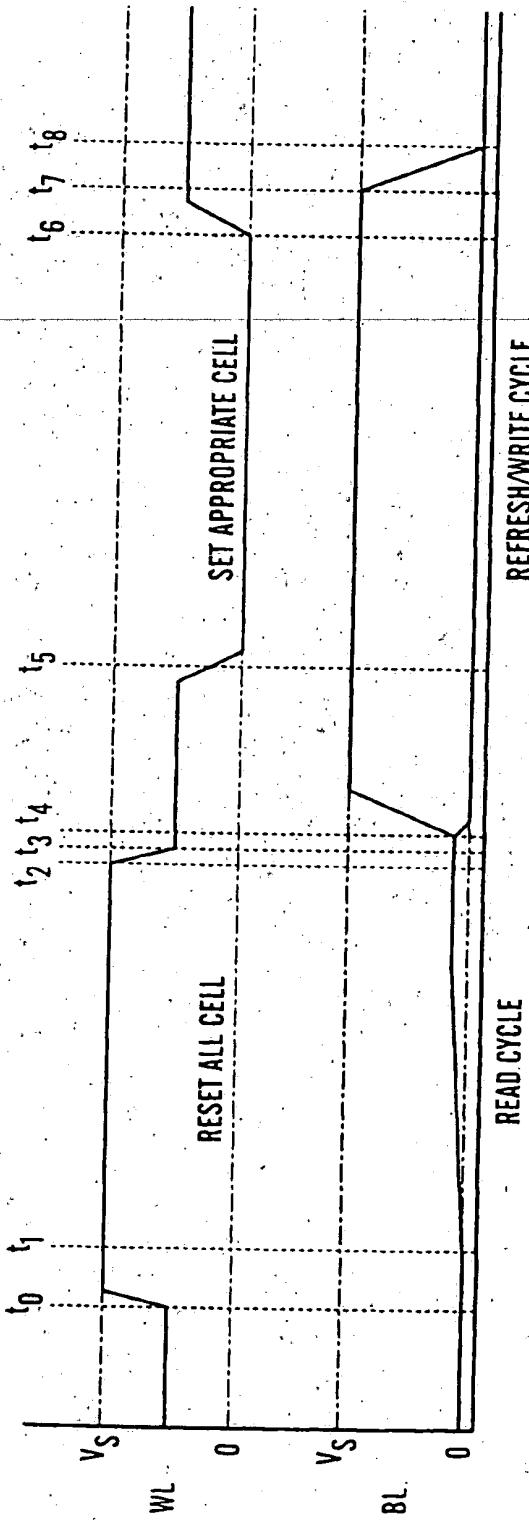
- $t_0$ : WORD LINE LATCHED, ACTIVE PULL UP TO  $V_S$
- $t_1$ : BIT LINE CLAMP RELEASED - SENSE AMP ON
- $t_2$ : BIT LINE DECISION - DATA LATCHED
- $t_3$ : WORD LINE RETURNED TO QUIESCENT  $V_S/2$
- $t_4$ : WRITE DATA LATCHED ON BIT LINES
- $t_5$ : WORD LINE PULLED TO 0 - SET/RESET CELL
- $t_6$ : WORD LINE RETURNED TO QUIESCENT  $V_S/2$
- $t_7$ : BIT LINES ACTIVELY RETURNED TO 0 CLAMP
- $t_8$ : READ/WRITE CYCLE COMPLETE

MAXIMUM DEPOLARIZING VOLTAGE  $V_S/2$



WORD LINES AT  $V_S/2$

SENSE AMPS BIASED NEAR  $V_S$



REFRESH/READ CYCLE

**Fig. 5**